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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Isamu Tobita

Serial No.: 09/886,200

Art Unit: 2854

Filed: June 21, 2001

Examiner: Minh H. Chau

For: PRINTER, FORM PRINTER, PRINTER CONTROL METHOD AND PRINT CONTROLLER

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

TRANSMITTAL OF SUPPLEMENTAL APPEAL BRIEF
(PATENT APPLICATION - 37 CFR 1.192)

1. Transmitted herewith in triplicate is the SUPPLEMENTAL APPEAL BRIEF in this application with respect to the Notice of Appeal filed on July 25, 2003 and the Appeal Brief filed on August 18, 2003.

NOTE: "The appellant shall, within 2 months from the date of the notice of appeal under § 1.191 in an application, reissue application, or patent under reexamination, or within the time allowed for response to the action appealed from, if such time is later, file a brief in triplicate." 37 CFR 1.192(a) (emphasis added).

2. STATUS OF APPLICANT

This application is on behalf of

☒ other than a small entity

☐ small entity

verified statement:

☐ attached

☐ already filed

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 CFR 1.17(f) the fee for filing the Appeal Brief is:

☐ small entity \$160.00

☐ other than a small entity \$320.00

Appeal Brief fee due \$0

CERTIFICATE OF MAILING (37 CFR § 1.8)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: 2/25/04

Serena Beller

(Type or print name of person mailing paper)

Serena Beller

(Signature of person mailing paper)

4. EXTENSION OF TERM

NOTE: The time periods set forth in 37 CFR 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 CFR 1.191(d). Also see Notice of November 5, 1985 (1060 O.G. 27).

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply.

(complete (a) or (b) as applicable)

- (a) ☐ Applicants petition for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 410.00	\$ 205.00
<input type="checkbox"/> three months	\$ 930.00	\$ 465.00
<input type="checkbox"/> four months	\$ 1,450.00	\$ 725.00
Fee		\$ _____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

- ☐ An extension for _____ months has already been secured and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.
Extension fee due with this request \$ _____
or

- (b) ☒ Applicants believe that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicants have inadvertently overlooked the need for a petition and fee for extension of time.

5. TOTAL FEE DUE

The total fee due is:

Appeal Brief fee \$0.00

Extension fee (if any) \$0.00

TOTAL FEE DUE \$0.00

6. FEE PAYMENT

- ☐ Attached is a check in the sum of \$ _____
☐ Charge Account No. 50-0563 (JP920000070US1) the sum of \$0.00.

A duplicate of this transmittal is attached.

7. FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

- ☒ If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 50-0563 (JP920000070US1).

AND/OR

- ☒ If any additional fee for claims is required, charge Account No. 50-0563 (JP920000070US1).

Reg. No.: 47,159


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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	Before the Examiner:
Isamu Tobita	:	Chau, Minh H.
Serial No.: 09/886,200	:	Group Art Unit: 2854
Filed: June 21, 2001	:	
Title: PRINTER, FORM PRINTER,	:	Intellectual Property Law
PRINTER CONTROL METHOD AND	:	IBM Corporation 972/B656
PRINT CONTROLLER	:	P.O. Box 12195
	:	Research Triangle Park, NC 27709

SUPPLEMENTAL APPEAL BRIEF

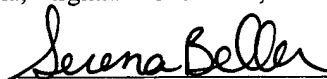
Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This brief is being submitted pursuant to 37 C.F.R. §1.193(b)(2)(ii). Appellant is furnishing herewith three (3) copies of this brief.

CERTIFICATION UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on February 25, 2004.



Signature

Serena Beller

(Printed name of person certifying)

I. INCORPORATION BY REFERENCE

The Appellant hereby incorporates herein by reference Sections I-V and VIII-IX of Appellant's Brief mailed on August 18, 2003.

II. ISSUE

A. Are claims 1-4, 6 and 10-11 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi et al. (U.S. Patent No. 5,039,238) (hereinafter "Kikuchi") in view of Ohsawa et al. (U.S. Patent No. 4,774,882) (hereinafter "Ohsawa")?

B. Are claims 5 and 12-13 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi in view Ohsawa and in further view of the IBM Technical Disclosure Bulletin (NN79034110) (hereinafter "IBM Disclosure Bulletin")?

C. Are claims 7-9 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi in view of Kobayashi et al. (U.S. Patent No. 4,566,813) (hereinafter "Kobayashi")?

III. GROUPING OF CLAIMS

Claims 1-4 and 6 form a first group.

Claims 12 and 13 form a second group.

Claims 5, 7, 8, 9, 10, 11 should not be grouped together and should be considered separately.

The reasons for these groupings are set forth below in Appellant's arguments in Section IV.

IV. ADDITIONAL ARGUMENTS

- A. Claims 1-4, 6 and 10-11 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi in view of Ohsawa.

The Examiner has rejected claims 1-4, 6 and 10-11 as being unpatentable over Kikuchi in view of Ohsawa. Paper No. 11, page 2. Appellant respectfully traverses for at least the reasons stated below.

1. Kikuchi and Ohsawa, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Kikuchi and Ohsawa, taken singly or in combination do not teach or suggest "identifying a character set to be printed" as recited in claim 10. The Examiner cites columns 1-6 of Kikuchi as teaching the above-cited claim limitation. Paper No. 11, page 4. Appellant respectfully traverses and asserts that Kikuchi instead teaches enabling characters to be printed at different positions. Column 1, line 39. However, there is no language in the cited passages that teaches identifying a character set where a character set may refer to a particular setting, font, etc., of characters (images) to be printed. For example, a particular character set may have a particular thickness for its characters. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellant further asserts that Kikuchi and Ohsawa, taken singly or in combination do not teach or suggest "a data analyzer, for determining the type of character set included in print data" element as recited in claim 11. The Examiner cites element 101 in Kikuchi as teaching a data analyzer and columns 1-6 of Kikuchi as teaching determining the type of character set included in print data. Paper No. 11, page 4. Appellant respectfully traverses and asserts that Kikuchi instead teaches that CPU 101 communicates with other parts of the printer via an integrated I/O circuit which transfer signals from the printer's control panel 106 to the CPU 101 and

transfers signals from the CPU 101 to a timer circuit 103, a drive circuit 104, a line-feed motor 107 and a spacing motor 108. Column 1, lines 16-24. Kikuchi further teaches that the control panel 106 generates electrical signals that are sent via the I/O circuit 102 to the CPU 101 which responds to these signals and data received via the interface circuit 100 by controlling the timer circuit 103, the drive circuit 104, the line-feed motor 107, and the spacing motor 108 so that the desired information is printed by the wire-dot print head 105. Column 1, lines 27-35. However, there is no language in the cited passages that the CPU 101 determines the type of character set to be included in the print data. As stated above, a character set may refer to a particular setting, font, etc., of characters (images) to be printed. For example, a particular character set may have a particular thickness for its characters. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner has not presented any objective evidence for combining Kikuchi with Ohsawa.

A *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Kikuchi with Ohsawa (1) to have an impact force controller for changing the force with which the pins impact in

accordance with the settings for characters that are to be printed, as recited in claim 1 and similarly in claims 2, 4 and 6; (2) to generate impact power to the pins in accordance with the types of the identified character set, as recited in claim 10; and (3) to have a print header controller for employing the determination results obtained by the data analyzer to change the impact force transferred by the pins, as recited in claim 11, is "so that the design density for a selected character can be achieved." Paper No. 11, pages 3 and 5. This motivation is insufficient for a *prima facie* case of obviousness since it is merely the Examiner's subjective opinion without any support from objective evidence.

Kikuchi teaches a dot-matrix printer that includes a wire-dot print head having print wires which print dots by impact on a printing medium and a sensor for sensing the position of the print wires. Abstract. Kikuchi further teaches generating signals indicating the position of the print wires. Abstract. Kikuchi further teaches setting a parameter to determine a printing force with which each of the print wires impacts the printing medium. Abstract. Kikuchi further teaches a control and driving circuit that drives the print wire responsive to the signals from the sensors and the set parameter. Abstract. Kikuchi further teaches that the combination of the feature of setting a parameter for controlling the printing force and the feature of detecting the position of the print wire enables the control over printing force with a high reproducibility. Abstract.

Ohsawa, on the other hand, teaches a dot matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case of a high density imprint function. Abstract.

The Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining a reference (Kikuchi) which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force with a reference (Ohsawa) which teaches a dot

matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case of a high density imprint function. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). There is no suggestion in Kikuchi of increasing or decreasing the printing impact energy based on the type of density imprint function. Since the Examiner has not submitted objective evidence for modifying Kikuchi with the above reference, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to have an impact force controller for changing the force with which the pins impact in accordance with the settings for characters that are to be printed. *Id.* There is no suggestion in Kikuchi of a relationship between the force print wires will print on a printing medium and the characters that are to be printed. Since the Examiner has not submitted objective evidence for modifying Kikuchi to have an impact force controller for changing the force with which the pins impact in accordance with the settings for characters that are to be printed, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to generate impact power to the pins in accordance with the types of the identified character set. *Id.* There is no suggestion in Kikuchi of a correlation between the impact power of pins and the type of a character set. Since the Examiner has not submitted objective evidence for modifying Kikuchi to generate impact power to the pins in accordance with the types of the identified character set, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to have a print header controller for employing the determination results obtained by the data analyzer to change the impact force transferred by the pins. *Id.* There is no suggestion in Kikuchi of a relationship between the impact force transferred to the pins and the type of a character set. Since the Examiner has not submitted objective evidence for modifying Kikuchi to have a print header controller for employing the determination results obtained by the data analyzer to change the impact force transferred by the pins, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to achieve a design density for a selected character (Examiner's motivation). *Id.* The Examiner's motivation appears to have been gleaned from the secondary reference (Ohsawa). This is not evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him would have been motivated to modify the primary reference (Kikuchi) with the teachings of the secondary reference (Ohsawa). The Examiner's motivation is a motivation for the secondary reference (Ohsawa) to solve its problem. This is not a suggestion to combine the primary reference (Kikuchi) with the secondary reference (Ohsawa). The primary reference (Kikuchi) teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force. The Examiner must provide evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him, which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force, would have been motivated to modify the primary reference (Kikuchi) with the teachings of the secondary reference (Ohsawa), which teaches a dot matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case

of a high density imprint function. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) Merely stating what the secondary reference teaches is not evidence for combining a primary reference (Kikuchi) with the secondary reference (Ohsawa). *See Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

3. By combining Kikuchi with Ohsawa, the principle of operation of Kikuchi would change.

If the proposed modification or combination of the prior art would change the principle of the operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). Further, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). For the reasons discussed below, Appellant submits that by combining Kikuchi with Ohsawa, the principle of operation in Kikuchi would change and subsequently render the operation of Kikuchi to perform its purpose unsatisfactory.

As stated above, Kikuchi teaches a dot-matrix printer that includes a wire-dot print head having print wires which print dots by impact on a printing medium and a sensor for sensing the position of the print wires. Abstract. Kikuchi further teaches generating signals indicating the position of the print wires. Abstract. Kikuchi further teaches setting a parameter to determine a printing force with which each of the print wires impacts the printing medium. Abstract. Kikuchi further teaches a control and driving circuit that drives the print wire responsive to the signals from the sensors and the set parameter. Abstract. Kikuchi further teaches that the combination of the feature of setting a parameter for controlling the printing force and the feature

of detecting the position of the print wire enables the control over printing force with a high reproducibility thereby ensuring printing with an optimum printing force.

Abstract.

Ohsawa, on the other hand, teaches a dot matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case of a high density imprint function. Abstract. Ohsawa further teaches that the energizing power is selected as a smaller value in the high density imprint function than in the normal density imprint function. Column 4, lines 54-56. Ohsawa further teaches that it is possible to decrease the energizing power by reducing the respective value of the current, etc. to be supplied to the coil mentioned above; but, in this embodiment, as shown in Figure 5, the energizing power is reduced by supplying the energizing electric current to the solenoid in a less time. Column 4, lines 56-62.

By combining Kikuchi with Ohsawa, Kikuchi would no longer be able to generate signals indicating the position of the print wires and therefore would no longer be able to control the printing force with a high reproducibility to ensure printing with an optimum printing force (purpose of operation). Ohsawa does not teach measuring the position of the print wires when determining whether to increase or decrease the energizing power. Instead, Ohsawa teaches controlling the printing force without the feature of detecting the position of the print wire. By combining Kikuchi with Ohsawa, Kikuchi would no longer be able to generate signals indicating the position of the print wires. Consequently, Kikuchi would no longer be able to ensure printing with an optimum printing force. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-6 and 10-13. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-4, 6 and 10-11 in view of the cited prior art. M.P.E.P. §2143.

- B. Claims 5 and 12-13 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi in view of Ohsawa and in further view of the IBM Disclosure Bulletin.

The Examiner has rejected claims 5 and 12-13 as being unpatentable over Kikuchi in view of Ohsawa and in further view of the IBM Disclosure Bulletin. Paper No. 11, pages 5 and 7. Appellant respectfully traverses for at least the reasons stated below.

1. Kikuchi, Ohsawa and the IBM Disclosure Bulletin, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Kikuchi, Kobayashi and the IBM Disclosure Bulletin, taken singly or in combination, do not teach or suggest "a data analyzer, for determining the type of character set included in print data in accordance with the predetermined command that is entered when a character font is to be changed" as recited in claims 12 and 13. The Examiner cites element 101 in Kikuchi as teaching a data analyzer and columns 1-6 of Kikuchi as teaching determining the type of character set included in print data. Paper No. 11, page 7. Appellant respectfully traverses and asserts that Kikuchi instead teaches that CPU 101 communicates with other parts of the printer via an integrated I/O circuit which transfer signals from the printer's control panel 106 to the CPU 101 and transfers signals from the CPU 101 to a timer circuit 103, a drive circuit 104, a line-feed motor 107 and a spacing motor 108. Column 1, lines 16-24. Kikuchi further teaches that the control panel 106 generates electrical signals that are sent via the I/O circuit 102 to the CPU 101 which responds to these signals and data received via the interface circuit 100 by controlling the timer circuit 103, the drive circuit 104, the line-feed motor 107, and the spacing motor 108 so that the desired information is printed by the

wire-dot print heard 105. Column 1, lines 27-35. However, there is no language in the cited passages that the CPU 101 determines the type of character set to be included in the print data. As stated above, a character set may refer to a particular setting, font, etc., of characters (images) to be printed. For example, a particular character set may have a particular thickness for its characters. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner has not presented any objective evidence for combining Kikuchi with Ohsawa and the IBM Disclosure Bulletin.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Kikuchi with Ohsawa and the IBM Disclosure Bulletin to change the moving velocity of the pins to alter the impact force, as recited in claim 5, is "so that the impact force for the selected character can be precisely achieved." Paper No. 11, page 5. The Examiner's motivation for modifying Kikuchi with Ohsawa and the IBM Disclosure Bulletin for employing the determination results by the data analyzer to change the impact force transferred by the pins, as recited in claims 12 and 13, is "so that the print quality of a variety of

character font can be achieved." Paper No. 11, page 8. These motivations are insufficient to support a *prima facie* case of obviousness since it is merely the Examiner's subjective opinion.

As stated above, Kikuchi teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force. Abstract.

As stated above, Ohsawa, on the other hand, teaches a dot matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case of a high density imprint function. Abstract.

The IBM Disclosure Bulletin, on the other hand, teaches a specific impact velocity" that "should be assigned to each character in the font. IBM Technical Disclosure Bulletin (March 1979), page 4110. The IBM Disclosure Bulletin further teaches that attached to the rocker is a velocity transducer which feeds a signal proportional to the velocity of the rocker and thus the print element. The IBM Technical Disclosure Bulletin (March 1979), page 4110. Thus, the IBM Technical Disclosure Bulletin teaches assigning a specific impact velocity to each character.

The Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining a reference (Kikuchi) which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force with a reference (Ohsawa) which teaches a dot matrix printer that increases the printing impact energy in the case of a normal density imprint function and decreases the printing impact energy in the case of a high density imprint function with a reference (IBM Disclosure Bulletin) which teaches assigning a specific impact velocity to each character. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). There is no suggestion in Kikuchi of assigning a specific impact velocity to each character. Since the Examiner has not submitted objective

evidence for modifying Kikuchi with the above references, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 5 and 12-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to change the moving velocity of the pins to alter the impact force. *Id.* There is no suggestion in Kikuchi of changing the velocity of the pins. Further, there is no suggestion in Kikuchi of changing the velocity of the pins to alter the impact force. Since the Examiner has not submitted objective evidence for modifying Kikuchi to change the moving velocity of the pins to alter the impact force, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 5. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to employ the determination results by a data analyzer (determine the type of a character set included in the print data) to change the impact force transferred by the pins. *Id.* There is no suggestion in Kikuchi of determining the type of a character set. Further, there is no suggestion in Kikuchi of changing the impact force transferred by the pins based on the type of a character set. Since the Examiner has not submitted objective evidence for modifying Kikuchi to employ the determination results by a data analyzer to change the impact force transferred by the pins, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 12-13. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi so that the impact force for a selected character can be precisely achieved (Examiner's motivation). *Id.* The Examiner's motivation appears to have been gleaned from one of the secondary references (IBM Disclosure Bulletin). This is not evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him would have been motivated to modify the primary reference (Kikuchi) with the teachings of the

secondary reference (IBM Disclosure Bulletin). The Examiner's motivation is motivation for the secondary reference (IBM Disclosure Bulletin) to solve its problem. This is not a suggestion to combine the primary reference (Kikuchi) with the secondary reference (IBM Disclosure Bulletin). The primary reference (Kikuchi) teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force. The Examiner must provide evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him, which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force, would be motivated to modify the primary reference with the teachings of the secondary reference (IBM Disclosure Bulletin), which teaches assigning a specific impact velocity to each character. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000). Merely stating what the secondary reference teaches is not evidence for combining a primary reference (Kikuchi) with the secondary reference (IBM Disclosure Bulletin). *See Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 5. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi so that the print quality of a variety of character fonts can be achieved (Examiner's motivation). *Id.* Appellant respectfully requests the Examiner to clarify the motivation pursuant to 37 C.F.R. §1.104(c)(2) as the motivation is unclear. Since the Examiner has not submitted objective evidence for modifying Kikuchi with Ohsawa and the IBM Disclosure Bulletin, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 12-13. *Id.*

3. The Examiner has not presented a reasonable expectation of success when combining Kikuchi with the IBM Disclosure Bulletin.

The Examiner must present a reasonable expectation of success in combining Kikuchi with the IBM Disclosure Bulletin in order to establish a *prima facie* case of obviousness. M.P.E.P. §2143.02.

As stated above, Kikuchi teaches a dot-matrix printer that includes a wire-dot print head having print wires which print dots by impact on a printing medium and a sensor for sensing the position of the print wires. Abstract. Kikuchi further teaches generating signals indicating the position of the print wires. Abstract. Kikuchi further teaches setting a parameter to determine a printing force with which each of the print wires impacts the printing medium. Abstract. Kikuchi further teaches a control and driving circuit that drives the print wire responsive to the signals from the sensors and the set parameter. Abstract. Kikuchi further teaches that the combination of the feature of setting a parameter for controlling the printing force and the feature of detecting the position of the print wire enables the control over printing force with a high reproducibility thereby ensuring printing with an optimum printing force. Abstract.

The IBM Disclosure Bulletin, on the other hand, teaches a typewriter with electronic control of the print impact. Page 4110.

The Examiner has not presented any evidence as to a reasonable expectation of success in combining a reference (Kikuchi) which teaches a dot matrix printer with a reference (IBM Disclosure Bulletin) which teaches a typewriter. Hence, the Examiner has not presented a sufficient basis for a reasonable expectation of success. Consequently, the Examiner has not provided a *prima facie* case of obviousness for rejecting claims 5 and 12-13. M.P.E.P. §2143.02.

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 5 and 12-13 in view of the cited prior art. M.P.E.P. §2143.

C. Claims 7-9 are not properly patentable under 35 U.S.C. §103(a) as being unpatentable over Kikuchi in view of Kobayashi.

The Examiner has rejected claims 7-9 as being unpatentable over Kikuchi in view of Kobayashi. Paper No. 11, page 6. Appellant respectfully traverses for at least the reasons stated below.

1. Kikuchi and Kobayashi, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Kikuchi and Kobayashi, taken singly or in combination, do not teach or suggest "wherein the impact force is set to a mode at one of a plurality of levels, and the impact force controller changes the mode in accordance with the number of dots that are arranged across the widths of lines forming an object image" as recited in claim 8. The Examiner cites columns 3-5 of Kobayashi as teaching the above-cited claim limitation. Paper No. 11, page 6. Appellant respectfully traverses and asserts that Kobayashi instead teaches reducing the pulse width for a character to be printed next in response to a high temperature of the print head, i.e., in response to the print head printing a complex character. Kobayashi further teaches that the pulse width continues to be reduced until it has fallen below a lower limit. Kobayashi further teaches increasing the pulse width for a character to be printed next in response to a low temperature of the print head, i.e., in response to the print head printing a simple character. Kobayashi further teaches that the pulse width continues to be increased until it exceeds an upper limit. Hence, Kobayashi teaches determining if a pulse width is greater than or less than a limit. This language is not the same as setting the impact force to a mode at one of a plurality of levels. Further, this language is not the same as a controller changing modes in accordance with the number of dots that are arranged across the widths of lines forming an object image. Therefore, the Examiner has not presented a *prima*

facie case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellant further asserts that Kikuchi and Kobayashi, taken singly or in combination, do not teach or suggest "wherein, the command for changing the mode is included in print data for a character, and the impact force controller changes the mode in response to said mode" as recited in claim 9. The Examiner cites columns 3-6 of Kobayashi as teaching the above-cited claim limitation. Paper No. 11, page 7. Instead, as stated above, Kobayashi teaches reducing the pulse width for a character to be printed next in response to a high temperature of the print head, i.e., in response to the print head printing a complex character. Kobayashi further teaches that the pulse width continues to be reduced until it has fallen below a lower limit. Kobayashi further teaches increasing the pulse width for a character to be printed next in response to a low temperature of the print head, i.e., in response to the print head printing a simple character. Kobayashi further teaches that the pulse width continues to be increased until it exceeds an upper limit. Hence, Kobayashi teaches determining if a pulse width is greater than or less than a limit. This is not the same as setting the impact force to a mode at one of a plurality of levels. Further, there is no language in the cited passage of a command for changing the mode which is included in the print data for a character. Further, there is no language in the cited passage of a controller changing modes. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

2. The Examiner has not presented any objective evidence for combining Kikuchi with Kobayashi.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in

combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Kikuchi with Kobayashi to change the impact force exerted by the plurality of pins in accordance with the number of dots that are arranged across the widths of lines forming the print image, as recited in claims 7-8, is "so that the thickness or the print density of a selected character or image can be consistency maintained." Paper No. 11, page 6. This motivation is insufficient to support a *prima facie* case of obviousness since it is merely the Examiner's subjective opinion.

As stated above, Kikuchi teaches a dot-matrix printer that includes a wire-dot print head having print wires which print dots by impact on a printing medium and a sensor for sensing the position of the print wires. Abstract. Kikuchi further teaches generating signals indicating the position of the print wires. Abstract. Kikuchi further teaches setting a parameter to determine a printing force with which each of the print wires impacts the printing medium. Abstract. Kikuchi further teaches a control and driving circuit that drives the print wire responsive to the signals from the sensors and the set parameter. Abstract. Kikuchi further teaches that the combination of the feature of setting a parameter for controlling the printing force and the feature of detecting the position of the print wire enables the control over printing force with a high reproducibility. Abstract.

Kobayashi, on the other hand, teaches a dot-matrix print controller having a dot pattern generating means for generating a dot pattern to be printed and a means for supplying current pulses to a dot-matrix print head in accordance with an output of said dot pattern generating means, said controller comprising a counter means for counting the number of dots of a dot pattern to be printed; and a pulse width control means for controlling the width of said current pulses applied to said print head so that the thickness of print is constant. Abstract.

The Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining a reference (Kikuchi) which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force with a reference (Kobayashi) which teaches a dot matrix controller comprising a counter means for counting the number of dots of a dot pattern to be printed. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). There is no suggestion in Kikuchi of counting the number of dots of a dot pattern to be printed. Since the Examiner has not submitted objective evidence for modifying Kikuchi with the above reference, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7-9. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi to change the impact force exerted by the plurality of pins in accordance with the number of dots that are arranged across the widths of lines forming the print image. *Id.* There is no suggestion in Kikuchi of changing the impact force in accordance with a number of dots forming the print image. Since the Examiner has not submitted objective evidence for modifying Kikuchi to change the impact force exerted by the plurality of pins in accordance with the number of dots that are arranged across the widths of lines forming the print image, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7-9. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Kikuchi so that the thickness or the print density of a selected character or image can be consistency maintained (Examiner's motivation). *Id.* The Examiner's motivation appears to have been gleaned from the secondary reference (Kobayashi). This is not evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him would have modified the primary reference (Kikuchi) with a secondary reference (Kobayashi). The primary reference (Kikuchi) teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force. The Examiner must provide evidence as to why one of ordinary skill in the art with the primary reference (Kikuchi) in front of him, which teaches setting a parameter for controlling the printing force and detecting the position of the print wire to control the printing force, would be modified with a secondary reference (Kobayashi) which teaches a dot matrix controller comprising a counter means for counting the number of dots of a dot pattern to be printed. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) Merely stating what the secondary reference teaches is not evidence for combining a primary reference (Kikuchi) with the secondary reference (Kobayashi). *See Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7-9. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7-9 in view of the cited prior art. M.P.E.P. §2143.

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Respectfully submitted,

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